although it will probably never answer such expectations as those of Gnündinger. Many other practitioners have also employed this remedy for other infectious diseases with favourable results. Dr. Ullman concludes this article with a brief description of the following remarkable case. Amongst other children, a boy, eight years old, was taken ill with diphtheria of the tonsils and violent general symptoms two months ago. On the second day of the treatment, the morbid process, nevertheless, passed into the larynx, the patient got the barking cough, and severe symptoms of stenosis of the larynx appeared. Besides 15 grammes of benzoate of soda to be taken internally every day, Ullmann also ordered this remedy to be inhaled in a solution of 10 per cent. by means of a steam-inhaling apparatus every two hours, after which treatment, abundant blood-coloured, dough-like, diphtheritic coats were ejected by coughing. After five days, the boy, who had been given up, was cured, but he did not regain his proper voice for a fortnight.—*Lond. Med. Record*, Nov. 15, 1879.

The Physiological Action and Therapeutic Value of Sclerotic Acid.

Sclerotic acid is probably the active principle of ergot of rye. It was discovered in 1877 by Dragendorff of Dorpat, and is an amorphous, cinnamon-brown substance, of the empirical formula $C_{12}H_{19}NO_9$, hygroscopic, and readily soluble in water. Good ergot contains about 4 or 5 per cent. of it in combination with bases. It is a very feeble acid, and in the presence of calcic carbonate only causes an evolution of carbonic acid when warmed. With sodium, however, it forms a stable sclerotinate. With phospho-molybdate of ammonia its aqueous solution gives a dark green, with tannin, a reddish precipitate. So much for its chemistry. Its physiological properties have lately undergone very careful investigation by Nikitin in Professor Rossbach's laboratory at Wurzburg (*Wurzburger Phys. Med. Verhand.*, xiii.; *Centralblatt Med. Wiss.*, No. 42, 1879). He finds that it is so rapidly excreted by the kidneys in warm-blooded animals that not a trace can be detected in from forty to forty-eight hours after its administration. Very large doses cause death by general paralysis; and in warm-blooded animals their immediate effect is a depression of temperature of from 1° to 3° Cent. which continues until death. Professor Binz (*Grundzüge der Arnzeimittellehre. Sechste Auflage*, S. 53) states that 0.01 gramme sclerotic acid gradually brought on general paralysis in a middle-sized specimen of *Rada esculenta*, but that the next day the creature was again well and lively. Nikitin sums up the action of sclerotic acid and its sodium salt as follows:—They both possess the physiological and therapeutic properties of ergot itself, but the sclerotinate is a weaker drug than the acid. Both chiefly act on the central nervous system. Frogs are very sensitive to the acid; among mammals, carnivora are more affected by it than herbivora. In frogs the reflex irritability of the spinal cord is completety abolished; in warm-blooded animals it is never quite lost even just before death. The acid only paralyzes the sensory nerves if brought into direct contact with their peripheral ends; the motor nerves as well as the striped muscles are unaffected by it. In mammals the heart is not influenced even by relatively large doses. The blood-pressure is only permanently reduced by large doses. At death the respiration ceases before the heart. In mammals the acid accelerates the intestinal peristalsis; and it excites contraction both of the pregnant and non-pregnant uterus, pre-existing contraction being intensified so that the organ assumes a paler tint. Nikitin has not observed any poisonous effects on the fœtus *in utero* either from the acid or the sodium sclerotinate. From his experiments on animals, he calculates that an adult man weighing fifty kilogrammes would be killed by about ten grammes sclerotic acid. In any case it is a much less powerful poison than most of our officinal alkaloids. The ordinary dose which has been hitherto given by subcutaneous injection is, however, only 0.02 to 0.03 gramme two or three times daily. Sclerotic acid seems likely before long to partially replace ergot as a drug. It has the advantage of remaining indefinitely without loss of strength, if only kept in a dry place and undissolved. Its sodium salt Nikitin considers the best preparation for internal use in the human subject. Subcutaneous injection of either drug causes a "sharp biting" pain, which passes off in a few minutes. Von Ziemssen claims for sclerotic acid over ergotin that the former causes no inflammation at the seat of puncture.—*Med. Times and Gazette*, Dec. 6, 1879.

On Rectal Alimentation.

Alluding to an article by M. Michel, which has lately appeared in the *Gazette Hebdomadaire*, giving an account of the trials of rectal alimentation that have been made, and in which he came to a conclusion unfavourable to the absorption of the nutritive matter of the substances injected, Prof. **BROWN-SÉQUARD** observes, in the number of the same journal for November 14, that, however applicable this conclusion may be to enemata of milk, broth, eggs, or defibrinated blood, it certainly is not so with regard to enemata of meat and pancreas. The practical question is not whether the large intestine does or does not secrete juices endowed with digestive power. In a therapeutical point of view the question at the present time is to know whether, on mixing with the alimentary matters either gastric juice or pancreatic juice, and injecting the mixture into the intestinal canal, digestion of these matters will take place, with absorption of the product of digestion. The experiments and clinical observations of Leube and of Fiechter, and those of Prof. Brown-Séquard himself, place the fact quite beyond contradiction; and experiments showing that the large intestine is not possessed of digestive functions do not contradict this assertion. It is a question of artificial digestion, in which the large intestine may be as inert as any vessel in which this might be conducted.

Prof. Brown-Séquard refers to several cases—some published, and others not —in which he has by means of enemata of meat and pancreas been able to keep patients for days and weeks (in one for more than three months) without loss of weight and strength. The quantity of meat required, when a patient has to be maintained solely in this manner, is at least 400 to 500 grammes per diem, and of pancreas from 150 to 200 grammes—these quantities serving for two daily enemata. When the pancreas is quite fresh, the digestion of these substances is so complete that no traces of their presence can be found in the well-formed feces which the patient passes—the tissues of both the gland and the flesh having been evidently digested in a complete manner.

In the number of the *Gazette* for November 21, Prof. **MAYET**, of Lyons, states—"I have employed this means in the Lyons hospitals for six years, but with certain precautions, which I believe to be of considerable importance. Why should we inject the tissue of the pancreas, which contains unabsorbable substances, and meat in a state of nature? Even chopped up and triturated, such a mixture might cause irritation of the intestine, and not be easily retained. To obviate this inconvenience, I have the pancreas bruised in a mortar with tepid water at about the temperature of 37° C., and then press the pulp obtained in a cloth. The liquid so procured is intimately mixed and triturated with the flesh without fat, which has been chopped and separated from all fibrous parts, and with the yolk of an egg. The product is left to stand during two hours, keeping it at the same temperature, and is then thrown into the rectum, first cleared out